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Rui Li

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EXAMINER

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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 10/756,152  
Filing Date: January 12, 2004  
Appellant(s): Rui Li

\_\_\_\_\_  
Dennis M. de Guzman  
(Registration No. 41,702)  
For Appellant

**EXAMINER'S ANSWER**

1. This is in response to the appeal brief filed on May 07, 2010 appealing from the Office Action (Non-Final Rejection) mailed on August 05, 2009.

**REAL PARTY IN INTEREST**

2. The statement identifying the real party in interest is contained in the appeal brief, which is Foundry Networks, Inc.

**RELATED APPEALS AND INTERFERENCES**

3. The examiner is not aware of any related appeals, interferences, or judicial proceedings, which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**STATUS OF THE CLAIMS**

4. The statement of the status of claims contained in the appeal brief is correct.  
Claims 1-36 and 43-52 are pending and involving in this appeal.  
Claims 37-42 have been canceled.

**STATUS OF AMENDMENT**

5. The appellant's statement of the status of amendments after non-final rejection contained in the brief is correct.

**SUMMARY OF CLAIMED SUBJECT MATTER**

6. The summary of claimed subject matter contained in the appeal brief is correct.

**GROUND OF REJECTION TO BE REVIEWED ON APPEAL**

7. The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

**CLAIMS APPENDIX**

8. The copy of the appealed claims contained in the Appendix to the appeal brief is correct.

**EVIDENCE (REFERENCES) RELIED UPON**

9. List of evidence relied upon.
- (a) US Patent No. 7,031,314, published on April 18, 2006, filed on April 19, 2002 by Craig et al.
  - (b) US Patent No. 7,055,028, published on May 30, 2006, filed on April 29, 2002 by Peiffer et al.
  - (c) US Patent No. 6,954,780, published on October 11, 2005, filed on June 07, 2002 by Susai et al.

**GROUND OF REJECTION**

10. Claims 1-5, 9-34, 36, 43-50, and 52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Craig et al (U.S. Patent No. 7,031,314) in view of Peiffer et al (U.S. Patent No. 7,055,028).

Claims 6-8, 35, and 51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Craig et al (U.S. Patent No. 7,031,314) in view of Peiffer et al (U.S. Patent No. 7,055,028), as applied to the claim 1 above, and further in view of Susai et al (U.S. Patent No. 6,954,780).

**CLAIM REJECTIONS - 35 USC § 103(a)**

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claims 1-5, 9-34, 36, 43-50, and 52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Craig et al (U.S. Patent No. 7,031,314) in view of Peiffer et al (U.S. Patent No. 7,055,028).

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13. As to claim 1, Craig et al teach a method, comprising: at a network device (service module), providing a client-side connection and a server-side connection (abstract, figure 4, and column 16 line 59 to column 17 line 24, service module provides two connections see reference nos. 450 and 455 of figure 4); receiving at the network device via the client-side connection a communication that signals the server-side connection to close (figure 4, and column 17 lines 57-66, a wireless client sends an update/close signal to the service module see reference no. 440 of figure 4); and maintaining, by the network device, at least the server-side connection in response to the communication received via the client-side connection (see abstract, figure 4, and column 17 line 66 to column 18 line 11, during the close state the service module responds to communication received by the wireless client in order to close connection that closing the client-side connection and maintaining the server-side connection until a FIN signal received from the wireless client see reference nos. 450 and 455 of figure 4).

However, Craig et al do not explicitly teach that the client-side connection and server-side connection are hypertext transfer protocol (HTTP) connections; and maintaining persistent, by the network device, at least the server-side connection in response to the communication received via the client-side connection.

Peiffer et al teach a method, comprising: at a network device (networking device), providing a hypertext transfer protocol (HTTP) client-side connection and a HTTP server-side connection (abstract, figure 3, and column 8 lines 8-17, networking device receive HTTP requests from client and HTTP responses from server); and maintaining persistent, by the network device (figure 7, column 9 lines 58-63, and

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column 10 lines 33-57, networking device establishing and maintaining presentment connections with clients and servers), at least the server-side connection in response to a communication received via the client-side connection (figure 7, and column 10 lines 2-17, in response to access server request from the clients the networking device terminate client connections and maintain persistent server connections).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Peiffer et al stated above in the method of Craig et al because it would have increased server-side connection security and maximized the utilization and reduced excessive overhead of a network server by using a one session server-side connection for the multiple sessions client-side connection.

14. As to claim 2, Craig et al do not explicitly teach that closing the client-side connection while the server-side connection is maintained persistent closing the client-side connection while the server-side connection is maintained persistent.

Peiffer et al teach that closing the client-side connection while the server-side connection is maintained persistent (figure 7, column 9 lines 58-63, and column 10 lines 2-17 and 33-57, Peiffer et al teach that periodically terminate client connection and maintain persistent connection with server).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Peiffer et al stated above in the method of Craig et al because it would have increased server-side connection security

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and maximized the utilization and reduced excessive overhead of a network server by using a one session server-side connection for the multiple sessions client-side connection.

15. As to claim 3, Craig et al teach that de-linking, by the network device, the server-side connection from the client side connection in response to a RESET (update/close) packet received by the network device via the client-side connection (figure 4, and column 17 line 57 to column 18 line 11).

16. As to claims 4-5, Craig et al teach that de-linking, by the network device, the server-side connection from the client side connection in response to a FIN packet received by the network device via the client-side connection; and closing both the client-side and server-side connections in response to a FIN packet received by the network device via the server-side connection (figure 4, and column 17 line 57 to column 18 line 11).

17. As to claims 9-10, Craig et al teach that modifying, by the network device, a header in the communication, form a format that signals the server-side connection to close to a format that is unrecognizable by a server coupled to the server-side connection, to cause the server to ignore the modifier header (figure 3A, and column 11 line 45 to column 12 line 3, if the packet does not match a classification rule (a format unrecognizable by a server), then modifying the packet header to replace the original information to terminate the packet and ignore the modifier header by the server, which is functionally equivalent to the claimed limitations); and modifying the header in the



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request to the form that is unrecognizable to the server includes at least one of modifying a name of the header and modifying a value of the header (figure 3A, column 7 line 57 to column 8 line 23, if the packet does not match a classification rule (a format unrecognizable by a server), then modifying the packet header (protocol field or device ID or predetermined value) to replace the original information to terminate the connection, which is functionally equivalent to the claimed limitations).

18. As to claims 11-12, Craig et al do not explicitly teach that changing, by the network device, a HTTP version value indicated in the communication to another HTTP version value that is recognizable by a server, coupled to the server-side connection, as being associated with a persistent connection; and adjusting a checksum based on a difference between the HTTP version values.

Peiffer et al teach that changing, by the network device, a HTTP version value indicated in the communication to another HTTP version value that is recognizable by a server, coupled to the server-side connection, as being associated with a persistent connection; and adjusting a checksum based on a difference between the HTTP version values (column 9 lines 22-48, Peiffer et al teach that determining the type of the request and use that information to match proper version of HTTP request with server-side socket, which is functionally equivalent to the claimed limitations and implies that changing a HTTP version value that is recognizable by a server).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Peiffer et al stated above in the

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method of Craig et al because it would have maximized the utilization of a network server by providing service to a plurality of HTTP request versions.

19. As to claim 13, Craig et al teach that the request includes a header having a proxy format (figures 4-5, and column 18 lines 22-42).

20. As to claim 43, Craig et al teach that the network device includes a switch (figures 3s-4); and Peiffer et al also teach that the network device includes a switch (figure 3 and 9).

21. As to claim 44, Craig et al do not explicitly teach that changing the HTTP version value to another HTTP version value includes changing, by the network device, from HTTP version1.0 indicated in the request to HTTP version 1.1.

Peiffer et al teach that changing the HTTP version value to another HTTP version value includes changing, by the network device, from HTTP version1.0 indicated in the request to HTTP version 1.1 (column 9 lines 22-57, Peiffer et al teach that determining the type of the request and use that information to match proper version of HTTP request with server-side socket, which is inherently implies that changing a HTTP version value from 1.0 to 1.1, also see column 2 lines 5-12).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Peiffer et al stated above in the method of Craig et al because it would have maximized the utilization of a network server by providing service to a plurality of HTTP request versions.

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22. As to claims 14-21 and 45, they are also rejected for the same reason set forth to rejecting claims 1-5, 9-13, and 43 above, since the claims 14-21 and 45 do not teach or define any new limitations than above claims 1-5, 9-13, and 45.

23. As to claims 22-34, 36, 46-50, and 52, they are also rejected for the same reasons set forth to rejecting claims 1-5, 9-13, and 43 above, since claims 22-34, 36, 46-50, and 52 are merely an apparatus for the method of operations defined in the method claims 1-5, 9-13, and 43.

24. Claims 6-8, 35, and 51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Craig et al (U.S. Patent No. 7,031,314) in view of Peiffer et al (U.S. Patent No. 7,055,028), as applied to the claim 1 above, and further in view of Susai et al (U.S. Patent No. 6,954,780).

25. As to claims 6-8, neither Craig et al nor Peiffer et al teach that identifying, by the network device, a Connection: Close header in the communication received via the client-side connection; replacing, by the network device, the Connection: Close header in the communication with a Connection: Keep-Alive header.

Susai et al teach that identifying, by the network device (interface unit, see figures 6A-6B), a Connection: Close header in the communication received via the client-side connection (column 7 lines 11-20, keep-alive header is not provided by the client, which implies that close header is present); replacing, by the network device, the Connection: Close header in the communication with a Connection: Keep-Alive header (column 7 lines 20-26); the network device performing at least one of increasing a total length of a packet having the Connection: Close header, fragmenting the packet having

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the Connection: Close header, and recalculating a checksum of the packet (column 7 lines 24-63, adding bytes (increasing a length of a packet) and modifying values (recalculating a checksum of the packet), which implies the claimed limitations); and inserting, by the network device, a Connection: Keep-Alive header in the communication if the communication does not contain any header information indicative of whether to close the HTTP connection (abstract, and column 7 lines 11-23).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Susai et al stated above in the method of Craig et al because it would have promoted efficient planning in the network and maximized the utilization of the network server by using different types of packets, protocol versions, and techniques.

26. As to claims 35 and 51, they are also rejected for the same reasons set forth to rejecting claim 6-8 above, since claims 35 and 51 are merely an apparatus for the method of operations defined in the method claims 6-8.

### **RESPONSE TO ARGUMENTS**

27. The examiner summarizes the various points raised by the appellant and addresses them individually.

28. As per appellants' arguments filed on December 01, 2008, appellants argued in substance that:

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**(A) Argument:** Appellant argues (Brief Pages 8-10, respect to claims 1, 14, 22, 27, and 31) that Craig does not meet the limitations of claim 1 that require, inter alia, and Peiffer does not cure the deficiencies of Craig with respect to the recitations in claim 1 of "receiving at said network device via said client-side connection a communication that signals said server-side connection to close; and maintaining persistent, by said network device, at least the server-side connection in response to said communication received via said client-side connection."

**Response:** Craig et al teach a method, comprising: at a network device (service module), providing a client-side connection and a server-side connection (abstract, figure 4, and column 16 line 59 to column 17 line 24, service module provides two connections see reference nos. 450 and 455 of figure 4); receiving at the network device via the client-side connection a communication that signals the server-side connection to close (figure 4, and column 17 lines 57-66, a wireless client sends an update/close signal to the service module see reference no. 440 of figure 4); and maintaining, by the network device, at least the server-side connection in response to the communication received via the client-side connection (see abstract, figure 4, and column 17 line 66 to column 18 line 11, during the close state the service module responds to communication received by the wireless client in order to close connection that closing the client-side connection and maintaining the server-side connection until a FIN signal received from the wireless client see reference nos. 450 and 455 of figure 4).

In addition, Peiffer et al teach a method, comprising: at a network device (networking device), providing a hypertext transfer protocol (HTTP) client-side

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connection and a HTTP server-side connection (abstract, figure 3, and column 8 lines 8-17, networking device receive HTTP requests from client and HTTP responses from server); and maintaining persistent, by the network device (figure 7, column 9 lines 58-63, and column 10 lines 33-57, networking device establishing and maintaining persistent connections with clients and servers), at least the server-side connection in response to a communication received via the client-side connection (figure 7, and column 10 lines 2-17, in response to access server request from the clients the networking device terminate client connections and maintain persistent server connections).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Peiffer et al stated above in the method of Craig et al because it would have increased server-side connection security and maximized the utilization and reduced excessive overhead of a network server by using a one session server-side connection for the multiple sessions client-side connection (Peiffer suggests claimed invention for improvement and motivation to combined references see column 10 lines 2-17).

Accordingly, appellant's arguments that the claims 1, 14, 22, 27, and 31 are not rendered obvious by the Craig and Peiffer patents are moot.

**(B) Argument:** Appellant argues (Brief Pages 10-12, respect to claims 9-10, 20, 25, 28, and 32) that dependent claim 9 is also non-obvious due to the limitations recited therein. In particular, dependent claim 9 recites, inter alia, the following limitations "wherein maintaining persistent at least the server-side connection in response to said

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communication received via said client-side connection includes: modifying, by said network device, a header in the communication from a format that signals the server-side connection to close to a format that is unrecognizable by a server coupled to said server-side connection, to cause the server to ignore the modified header." These limitations are not met by the cited references.

**Response:** Craig et al teach that modifying, by the network device, a header in the communication, from a format that signals the server-side connection to close to a format that is unrecognizable by a server coupled to the server-side connection, to cause the server to ignore the modifier header (figure 3A, and column 11 line 45 to column 12 line 3, if the packet does not match a classification rule (a format unrecognizable by a server), then modifying the packet header to replace the original information to terminate the packet and ignore the modifier header by the server, which is functionally equivalent to the claimed limitations); and modifying the header in the request to the form that is unrecognizable to the server includes at least one of modifying a name of the header and modifying a value of the header (figure 3A, column 7 line 57 to column 8 line 23, if the packet does not match a classification rule (a format unrecognizable by a server), then modifying the packet header (protocol field or device ID or predetermined value) to replace the original information to terminate the connection, which is functionally equivalent to the claimed limitations). Therefore, Craig explicitly teaches and suggests the features of claims 9-10.

Accordingly, appellant's arguments that the claims 9-10, 20, 25, 28, and 32 are not rendered obvious by the Craig and Peiffer patents are moot.

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**(C) Argument:** Appellant argues (Brief Pages 12-13, respect to claims 11-12, 21, 26, 29, 33, and 44) that dependent claim 11 is also non-obvious due to the limitations recited therein. In particular, dependent claim 11 recites, inter alia, the following limitations “changing, by the network device, a HTTP version value indicated in the communication to another HTTP version value that is recognizable by a server, coupled to the server-side connection, as being associated with a persistent connection; and adjusting a checksum based on a difference between the HTTP version values.”

**Response:** Peiffer et al teach that changing, by the network device, a HTTP version value indicated in the communication to another HTTP version value that is recognizable by a server, coupled to the server-side connection, as being associated with a persistent connection; and adjusting a checksum based on a difference between the HTTP version values (column 9 lines 22-48, Peiffer et al teach that determining the type of the request and use that information to match proper version of HTTP request with server-side socket, which is functionally equivalent to the claimed limitations and implies that changing a HTTP version value that is recognizable by a server).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Peiffer et al stated above in the method of Craig et al because it would have maximized the utilization of a network server by providing service to a plurality of HTTP request versions. Therefore, Peiffer explicitly teaches and suggests the features of claims 11-12.

Accordingly, appellant's arguments that the claims 11-12, 21, 26, 29, 33, and 44 are not rendered obvious by the Craig and Peiffer patents are moot.



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(D) In conclusion, The rejections of claims 1-36 and 43-52 meet the requirements for a rejection based on obviousness, since the cited references (in combination) teach all of the claim limitations.

**EVIDENCE AND RELATED PROCEEDING(S) APENDIX**

29. No evidence is relied upon by the examiner in the rejection of the claims under appeal.

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

30. For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Bharat N Barot/

Primary Examiner, Art Unit 2455

September 09, 2010

**Conferees:**

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